

**REMARKS**

In the Office Action of November 13, 2003, claims 1-15 and 17-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,600,248 to *Westrom et al.* ("*Westrom*") in view of U.S. Patent No. 5,814,998 to *Gruenewald et al.* ("*Gruenewald*"); and claim 16 was rejected under 35 U.S.C. § 103(a) as being unpatentable over *Westrom* in view of U.S. Patent No. 6,476,951 B1 to *White*. Claims 1-24 remain pending, and Applicant submits that the rejections should be withdrawn for the reasons discussed below.

**Rejection of claims 1-15 and 17-24 under 35 U.S.C. § 103(a)**

A *prima facie* case of obviousness has not been established with respect to claims 1-15 and 17-24. To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), each of three requirements must be met. First, the references, taken alone or in combination, must teach or suggest each and every element recited in the claims. See M.P.E.P. § 2143.03 (8th ed. 2001). Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of these requirements must "be found in the prior art, and not be based on applicant's disclosure." M.P.E.P. § 2143 (8th ed. 2001).

Claim 1 recites a method, including "obtaining a second signal sample at a second location in the network; correlating the two signal samples; and establishing the location of [an injection point of foreign signals in a network] from the correlation result."

The Examiner concedes (Office Action, page 2) that *Westrom* fails to disclose the above-noted claim elements. In rejecting claim 1, the Examiner relies on *Gruenewald* (col. 2, lines 48-67; FIG. 2) in an attempt to cure *Westrom*'s deficiencies. According to the Examiner, it would have been obvious to a skilled artisan "to incorporate [*Gruenewald*'s]...teaching into

[*Westrom*'s]...invention, because it would provide two different locations where the two respective signals would be obtained and correlated in order to determine the fault location" (Office Action, page 2).

Contrary to the Examiner's position, *Gruenewald* fails to cure all of *Westrom*'s deficiencies. *Gruenewald* does not teach or suggest "establishing the location of the injection point [of foreign signals in a network] from the correlation result," as recited in claim 1. *Gruenewald* mentions localizing a place of origin of a partial discharge in a dynamoelectric high-voltage machine/system (e.g., col. 2, lines 59-64), which does not constitute the "establishing" element recited in claim 1. Accordingly, combining *Gruenewald* and *Westrom* will not yield all of the elements recited in claim 1. For at least this reason, a *prima facie* case of obviousness has not been established with respect to claim 1.

Even if *Gruenewald* could cure *Westrom*'s deficiencies—which the Office Action does not establish and to which Applicant does not acquiesce—a *prima facie* case of obviousness has not been established. Determinations of *prima facie* obviousness must be supported by a finding of "substantial evidence." See *In re Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001). Specifically, unless "substantial evidence" found in the record supports the factual determinations central to the issue of patentability, including motivation and expectation of success, the rejection is improper and should be withdrawn.

In this case, there is no "substantial evidence" in the record to support the alleged combination of *Gruenewald* and *Westrom*, and the requisite "clear and particular" motivation required to support a *prima facie* case of obviousness is lacking. The Office Action provides no evidence to show that a skilled artisan having *Westrom* before him would have been motivated to combine the reference with *Gruenewald* in a manner resulting in Applicant's claimed invention.

The Examiner merely provides a general description of how *Gruenewald* allegedly teaches certain features and fails to provide more than conclusory statements, lacking evidentiary basis, to support a motive for combining the references in a manner resulting in Applicant's claimed combination. Applicant submits that a skilled artisan having *Westrom* before him would not have been motivated to incorporate the relied upon portion of *Gruenewald* to the *Westrom* system to "determine the fault location," as the *Westrom* system already determines fault location and nothing would be gained by the combination. The Office Action does not show, by substantial evidence, that a skilled artisan would have been motivated to use "two different locations...to determine the fault location" in *Westrom*'s system. That combining the references might provide "two different locations where two respective signals would be obtained and correlated in order to determine the fault location" does not evidence a clear and particular motivation to modify *Westrom*'s system to determine the fault location in such a fashion. Further, the Office Action fails to show how (if at all) combining *Gruenewald* with *Westrom* would affect fault location accuracy and the effectiveness and efficiency of fault repair (Office Action, page 2). Applicant submits that there is no motivation, aside from an attempt to meet the terms of claim 1, to combine *Gruenewald* and *Westrom* in a manner resulting in Applicant's claimed invention.

As M.P.E.P § 2142 makes clear,

Knowledge of applicant's disclosure must be put aside  
...impermissible hindsight must be avoided and the legal  
conclusion must be reached on the basis of the facts gleaned from  
the prior art.

Moreover, Applicant draws attention to the following provisions set forth in M.P.E.P.

§ 2143.01:

If the proposed modification or combination of the prior art would  
change the principle of operation of the prior art invention being

modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

In this case, combining *Gruenewald* with *Westrom* would change the principle of operation of the prior art system being modified. In *Westrom*'s system, pulse streams are introduced to a cable when a fault occurs (col. 7, lines 34-36). Pulses are sampled and velocity of propagation is determined using reflection time and the known length of a cable (col. 8, lines 17-23). The propagation speed is then used to determine the distance to a fault. *Gruenewald*'s system uses two coupling units coupled to measuring points on a conductor, correlates the temporal sequence of coupled signals, and localizes a point of discharge based on the measuring points (col. 2, lines 50-61). Modifying *Westrom*'s system, which samples pulses at a point and calculates reflection from the end of a cable, to determine fault distance using *Gruenewald*'s coupling units would change *Westrom*'s principle of operation, which is improper under the provisions of M.P.E.P. § 2143.01.

For at least the foregoing reasons, a *prima facie* case of obviousness has not been established with respect to claim 1. The rejection of claim 1 under 35 U.S.C. §103(a) should, therefore, be withdrawn.

Similar to claim 1, independent claim 14 recites, *inter alia*, "...obtaining a second signal sample at a second location in the network...correlating the two signal samples; and...establishing the location of [an injection point of foreign signals in a network] from the correlation result."

For at least the reasons presented above in connection with claim 1, a *prima facie* case of obviousness has not been established with respect to claim 14. The rejection of claim 14 under 35 U.S.C. §103(a) should, therefore, be withdrawn.

Claims 2-13 depend from allowable base claim 1, and claims 15 and 17-24 depend from allowable base claim 14. Claims 2-13, 15, and 17-24 are allowable for at least the same reasons as presented above in connection with allowable base claims 1 and 14, respectively.

Moreover, claim 2 recites, *inter alia*: “finding a midpoint between the first location in the network and the second location in the network; and estimating the location of the injection point by locating a point that is a distance equal to the offset from the midpoint.” The Examiner alleges (Office Action, page 3) that *Westrom* teaches the above-noted elements. Applicant disagrees.

The relied-upon portion of *Westrom* (col. 8, lines 45-50) merely mentions:

...the controller will calculate the distance to the fault for each data set in accordance with the correlation process of FIG. 3. This calculated distance obtained from each data set will be averaged so as to produce improved accuracy. Finally, this averaged distance will be displayed on the L.C. display 36 for use by the repairmen in locating the exact location of the fault with a high degrees of accuracy.

The above portion of *Westrom* does not teach or suggest “finding a midpoint between the first location in the network and the second location in the network; and estimating the location of the injection point by locating a point that is a distance equal to the offset from the midpoint,” as claimed. In fact, the Examiner concedes (Office Action, page 2) that *Westrom* fails to disclose “obtaining a second signal sample at a second location in the network.” Further, *Gruenewald* fails to cure *Westrom*’s deficiencies. Because neither *Westrom* nor *Gruenewald*, nor any combination thereof, teaches or suggests each and every element recited in claim 2, the references fail to render claim 2 obvious.

Accordingly, Applicant requests withdrawal of the rejection under 35 U.S.C. § 103(a) and the timely allowance of claims 1-15 and 17-24.

**Rejection of claim 16 under 35 U.S.C. § 103(a)**

Initially, Applicant points out the following inconsistency in the Office Action. Claim 16 depends from claim 15, which in turn depends from independent claim 14. By virtue of such dependency, claim 16 includes all of the elements recited in claims 14 and 15. The Examiner concedes (Office Action, page 2) that *Westrom* fails to disclose all of the recitations of claim 14 (and therefore claim 15) and relies on *Gruenewald* in rejecting those claims. The Examiner, however, rejects claim 16 as being unpatentable over *Westrom* and *White*, without *Gruenewald*, alleging that *Westrom* “teach[es] the system as stated above expect that the link is a fiber-optic link” (Office Action, page 4). If the Examiner rejects claim 14 based on *Westrom* and *Gruenewald*, the rejection of claim 16, which includes all of the recitations of claim 14, must be based on at least those same references. That is to say, it is improper to reject claim 14 based on *Westrom* and *Gruenewald* and also reject claim 16, which ultimately depends from claim 14, using *Westrom* and *White* without *Gruenewald*.

The rejection of claim 16 as being unpatentable over *Westrom* and *White* is thus improper and does not afford Applicant the opportunity to properly evaluate the basis for the rejection. Applicant, therefore, requests that the Examiner withdraw the rejection of claim 16 under 35 U.S.C. § 103(a) as being unpatentable over *Westrom* in view of *White*. Should the Examiner continue to dispute the patentability of the pending claims, Applicant requests a new non-final Office Action, including clarification as to the grounds of rejection.

The impropriety of the rejection notwithstanding, a *prima facie* case of obviousness has not been established with respect to claim 16. Claim 16 ultimately depends from claim 14 and therefore includes all of the elements recited in claim 14. As discussed above, neither *Westrom* nor *Gruenewald*, nor any combination thereof teaches or suggests each and every element of claim 14. Moreover, *White* fails to cure all of the deficiencies of *Westrom* and *Gruenewald*.

That is, *White* fails to teach or suggest a combination including, for example, "...obtaining a second signal sample at a second location in the network...correlating the two signal samples; and...establishing the location of [an injection point of foreign signals in a network] from the correlation result," as recited in claim 14 and thus required by dependent claim 16. Accordingly, neither *Westrom*, *Gruenewald*, nor *White*, nor any combination thereof, teaches or suggests each and every element of claim 16. For at least this reason, a *prima facie* case of obviousness has not been established with respect to claim 16.

Even if *White* could cure the deficiencies of *Westrom* and *Gruenewald*—which the Office Action does not establish and to which Applicant does not acquiesce—there is no "substantial evidence" in the record to support a proper combination of *White* and *Westrom*, and the requisite "clear and particular" motivation required to support a *prima facie* case of obviousness is lacking. The Examiner merely provides a general description of how *White* allegedly teaches certain features and fails to establish, by substantial evidence, a clear and particular motive for combining the references in a manner resulting in Applicant's claimed combination. Further, as explained above in connection with claims 1 and 14, the requisite motivation for combining *Westrom* and *Gruenewald* is lacking.

For at least the foregoing reasons, a *prima facie* case of obviousness has not been established with respect to claim 16. Applicant therefore requests withdrawal of the rejection and the timely allowance of this pending claim.

**Conclusion**

In view of the foregoing, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims.

The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified above, Applicant declines to automatically subscribe to any statement or characterization in the Office Action.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 07-2347.

Respectfully submitted,

Dated: February 13, 2004

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